Physical screening and testing: From purpose to research to application

Orr, Rob Marc

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Physical Screening and Testing: From Purpose to Research to Application

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Tactical Research Unit

Bond University

Session Objectives:

- **<u>Discuss the purposes of different physical assessments</u>**
- Designing measures useful for assessing tactical personnel
- Applying assessments in the field

What is the purpose of the test?

- Purpose of the testing
  - Injury prediction
  - Occupational capability
  - General health
  - Research

http://bloximages.newyork1.vip.townnews.com/thehour.com/content/tncms/assets/v3/editorial/c/cc/cccdaf72-f1ec-59e8-a67a-d3746393b6d7/4fca9e7d97011.preview-300.jpg

What is the purpose of the test?

- Purpose of the testing
  - Why is this important to define?
  - To make the assessment fair
  - To make the assessment defendable

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- General Tactical Forces
  - Examples of Push Up standards to enlist

	AFP	NSW Pol	VIC Pol	Q POL	NT POL~	TAS Pol	NZ Pol	UK Pol	Metro Pol LA / Reno	ADF	QLD Fire & Rescue
Male	30	25*	5	N/A	5-25#	20	34	N/A	24	15**	N/A
Female	10+	25*	5	N/A		3	20	N/A	24	8	N/A

* On toes or knees

~ 2 sec cadence

Based on scoring system (5 repetitions = 2 points: 25 repetitions = 10 points)

\+ Specialist is 30 reps

** 66 Repetitions to a 1:2 cadence for Special Forces

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - Male scores – 22 Repetitions ✓
  - Female scores – 15 Repetitions ✗

What if the PASS score was 20 Repetitions?

- Would that account for differences in gender strength levels?

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - Male scores – 22 Repetitions ✗
  - Female scores – 15 Repetitions ✓

What if the PASS score was 15 for Females and 25 for Males?

- What if below 20 Repetitions was associated with an increased risk of injury – Would that increase the risk of injury to the female? (What is the duty of care?)
- Would that be fair for two people who had to do the same job regardless of gender?

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - Male A scores (38 years old) – 22 Repetitions ✗
  - Male B scores (21 years old) – 25 Repetitions ✓

What if the PASS score was 25 for Males?

- Would that account for differences in age related strength levels?

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - Male A scores (38 years old) – 22 Repetitions ✓
  - Male B scores (21 years old) – 25 Repetitions ✗

What if the PASS scores were:

- under 25 years of age – 30 Repetitions
- 25-30 years of age– 25 Repetitions
- 31-39 years of age – 20 Repetitions

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

- Would that be fair for two people who had to do the same job regardless of age?

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - What about Rank? Do all ranks do the same job?

https://upload.wikimedia.org/wikipedia/commons/a/ac/Australian-Afgan_Army_patrol_April_2010.jpg

https://www.army.mil/e2/c/images/2013/04/23/292155/size0.jpg

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - What about job role? Do all personnel do the same job?

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

What is the purpose of the test?

- Purpose of the testing – Setting standards
  - The purpose of the testing must be clearly stated and made known to the organization

http://upl.stack.com/wp-content/uploads/2013/09/Navy-Push-Ups-629x399.jpg

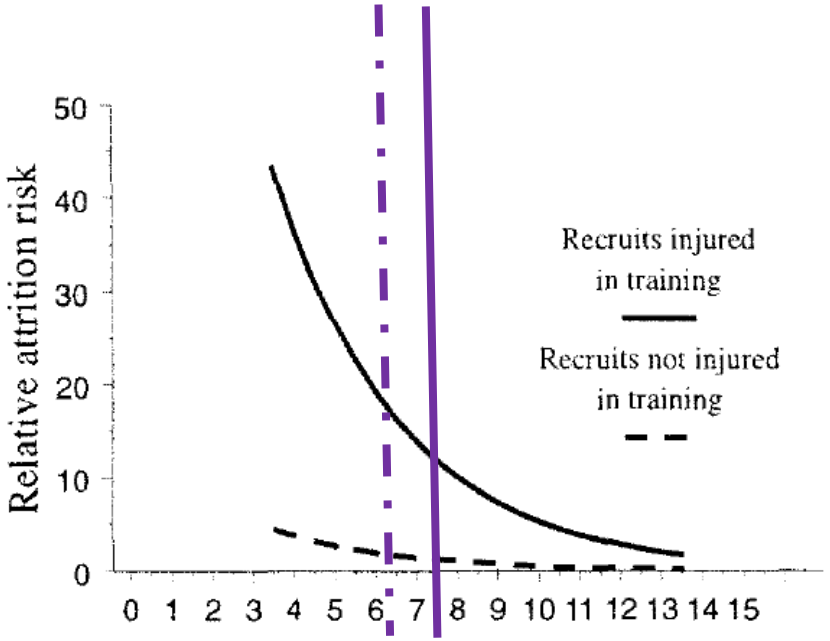
What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Research has shown, police and army personnel with lower fitness standards more likely to be injured in training

http://www.beckerhelicopters.com/images/site/military/military-pt.jpg

What is the purpose of the test?

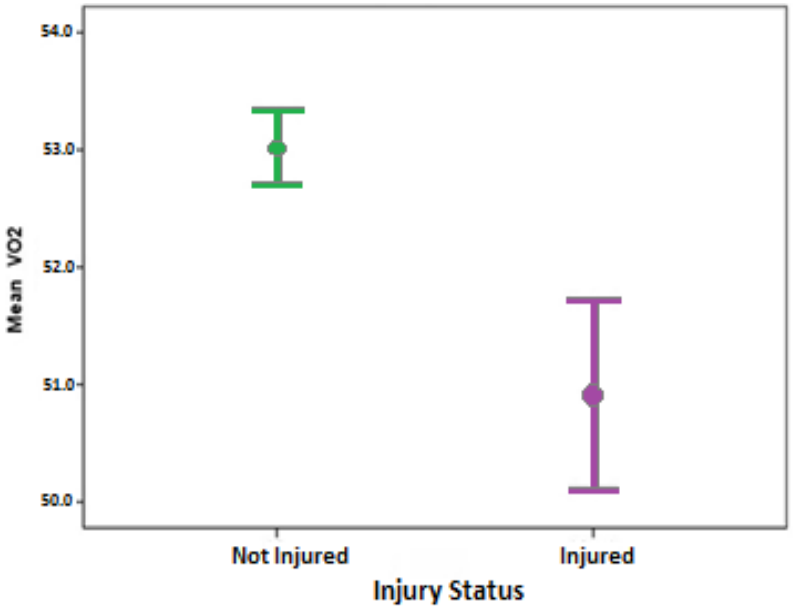
- Purpose of the testing – Injury prediction/prevention
  - Army Recruits
    - Measure was 20m Shuttle Run
      - Army = L7.5
      - Navy / Air Force = L6.5



Pope, R., Herbert, R., Kirwan, J. D., & Graham, B. J. (1999). Predicting Attrition in Basic Military Training. Mil Med, 164(10), 710-714

What is the purpose of the test?

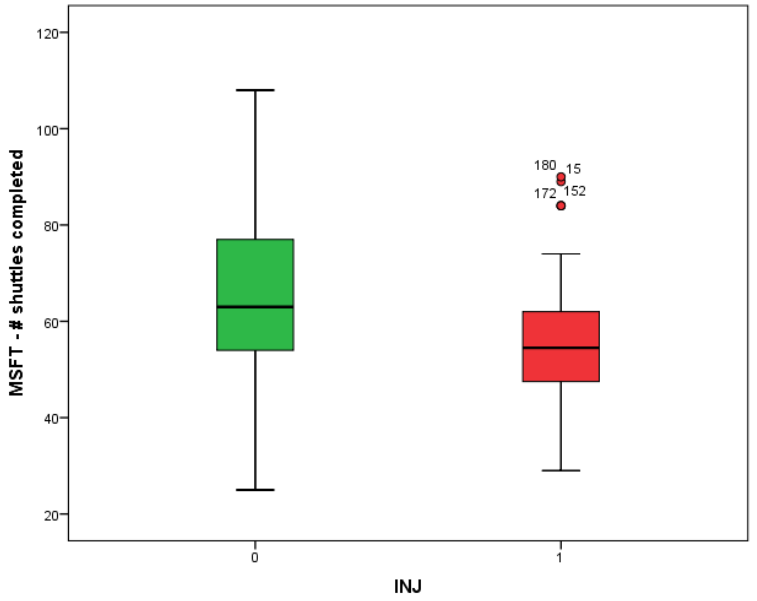
- Purpose of the testing – Injury prediction/prevention
  - Army Officer Recruits
    - Measure was 20m Shuttle Run
    - Was not an exclusion criterion but used to inform DS



Meigh, N., Steele, M. & Orr, R. M. (2012). Metabolic fitness as a predictor of injury risk in conditioned military trainees undertaking an arduous field training exercise. In N. A. S. Taylor & D. C. Billing (Eds.), *Paper presented at the proceedings of the 1st Australian Conference on Physiological and Physical Employment Standards*.

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was 20m Shuttle Run



Non Injured (0) M=65.6 Shuttles / Injured (1) M=55.1 Shuttles
$p<0.001$

Orr, et al., Unpublished work

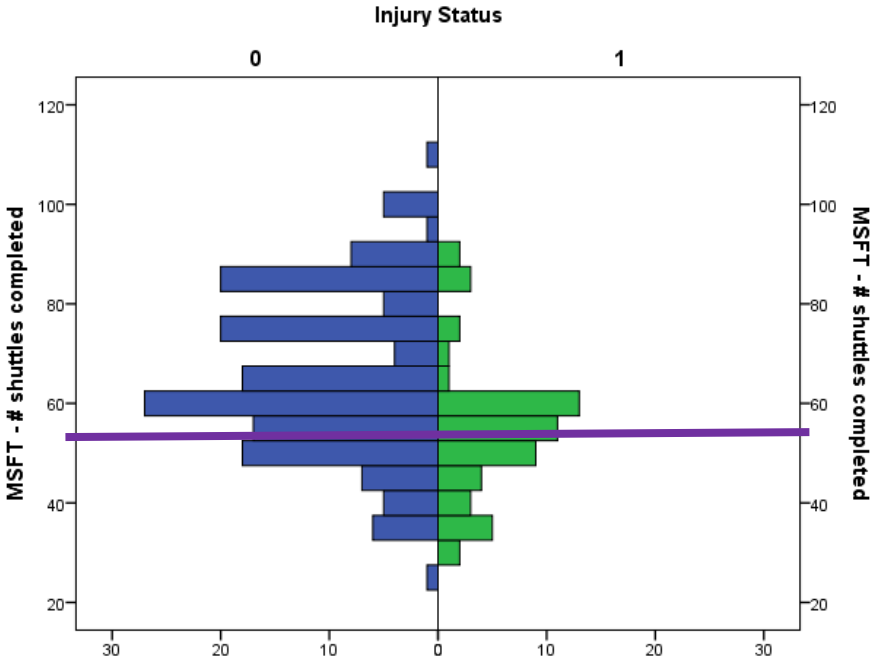
What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was 20m Shuttle Run

•Ln(inj)=1.644-0.045xMSFT

•So cut off point for MSFT is 51.9366 (Level 6.1 or 1040m)

		Predicted		
		INJ		**Percentage Correct**
		0	**1**	
NIL INJ INJ	0	159	4	**97.5**
	1	49	7	**12.5**
Overall Percentage				**75.8**

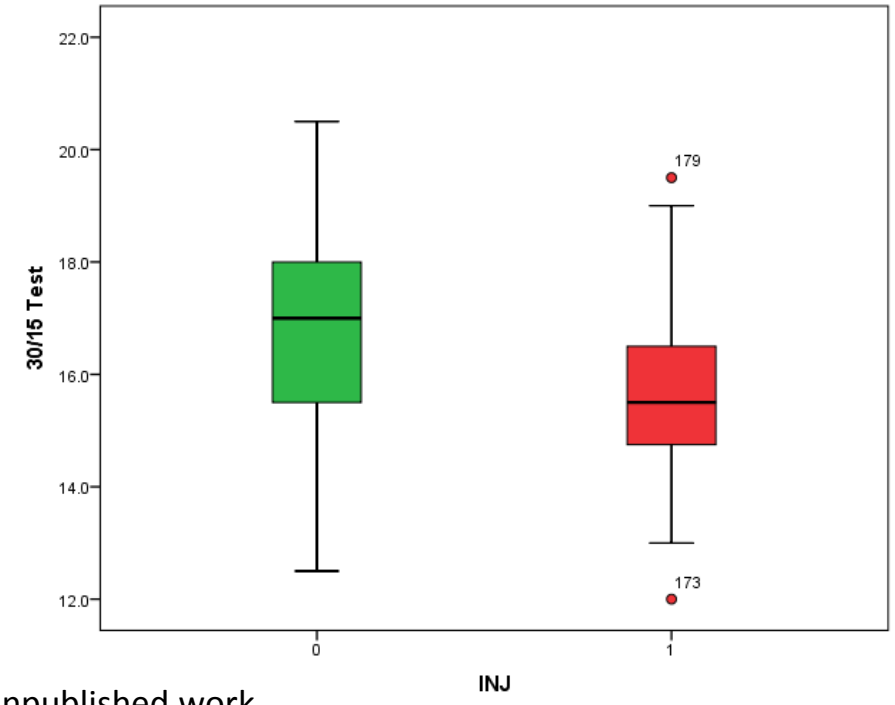


Orr, et al., Unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was 30-15 IFT

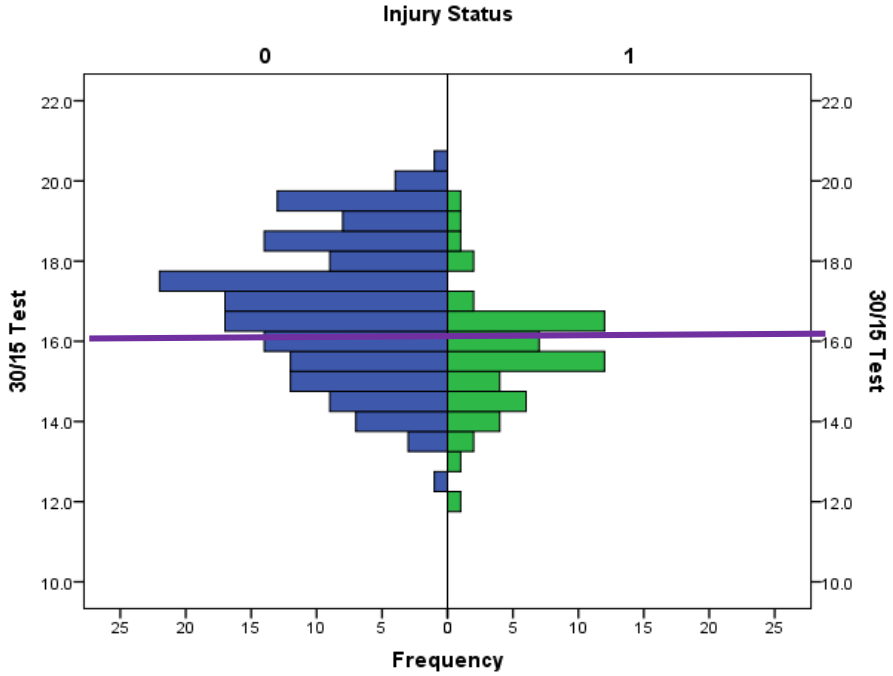
- Non Injured (0) M=16.9
- Injured (1) M=15.7
- $p<0.001$



Orr, et al., Unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was 30-15 Intermittent Fitness Test

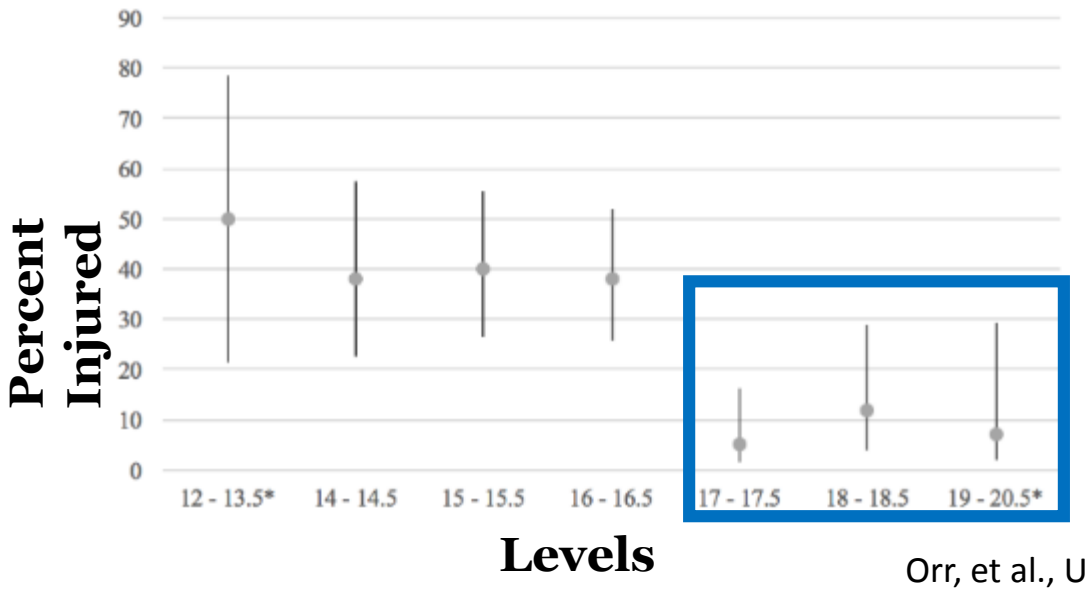


- Ln(inj)=7.456-.521x30-15score
- So cut off point for 30-15 is 15.65

Orr, et al., Unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was 30-15 IFT
    - Percent Injured vs. 30-15 IFT Score, 95% CI



Spearman's Rho correlation between injury and 3—15 IFT score

$r_s = -0.315$ $p < 0.001$

* Pooled results (small data sets)

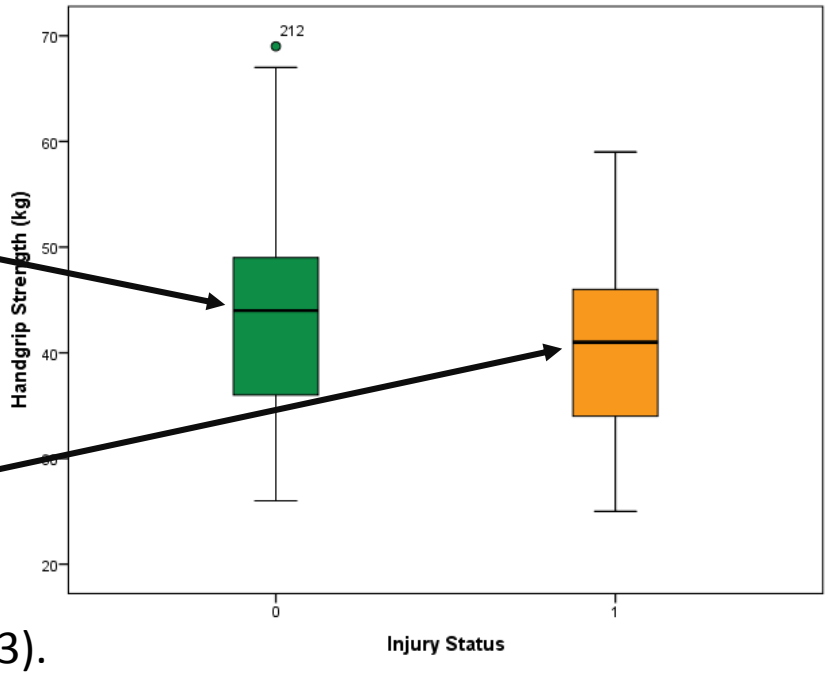
Orr, et al., Unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Grip Strength

43.18 ± 8.73 kg
(26-69)

40.48 ± 8.15kg
(25-59)

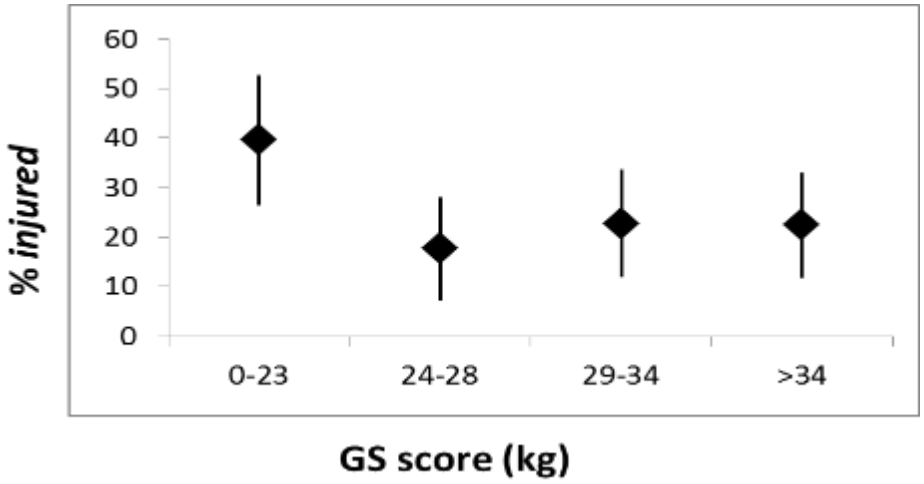


(rs[219]=.126, p=0.63).

Orr RM, Stierli, M, Hinton, B. & Steele, M (2013) Grip strength is associated with marksmanship and defensive tactics, but not injuries, in police recruits. Paper presented at the Australian Physiotherapy Conference 17-20 October 2013. Melbourne: Australia

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Grip Strength
    - Percentage of Recruits injured, by GS score, with 95% CI



Spearman's rank-order correlation between *injury* status & GS score:

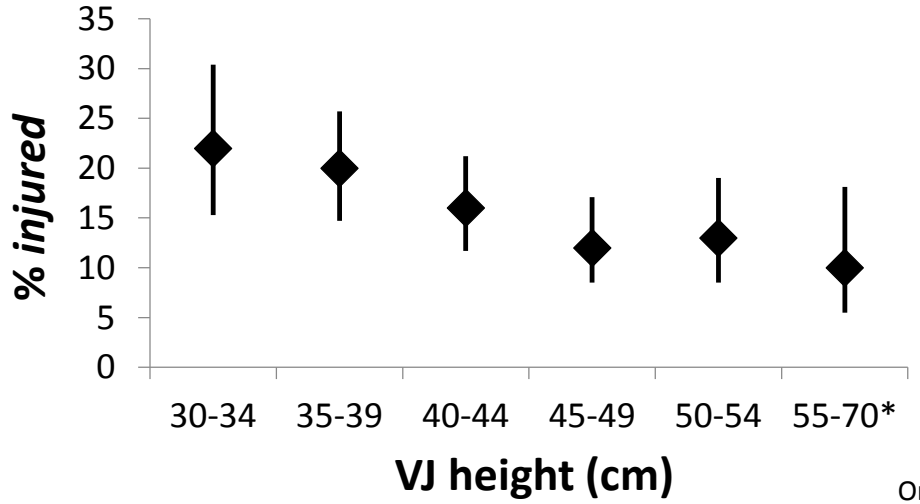
$r_s = -0.138, p = 0.042$

*bins in quartile ranges

Stewart et al., unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Vertical Jump
    - Percentage of Recruits **injured**, by VJ height, with 95% CI



Spearman's rank-order correlation between *injury* status & VJ score:

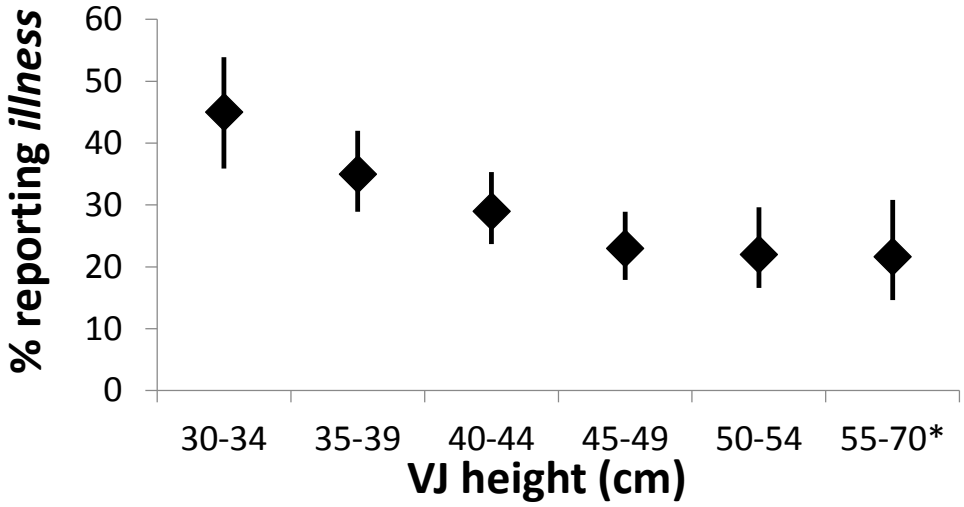
r_s = -.093, p = .003

* Pooled results (small cell counts)

Orr, R., Pope, R., Peterson, S., Stierli, M. & Hinton, B. (2016). Leg power as an indicator for risk of injury or illness in police recruits, International Journal of Environmental Research and Public Health– 13, 237; pp.1-10. doi:10.3390/ijerph13020237

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Vertical Jump
    - Percentage of Recruits reporting **illness**, by VJ height, with 95% CI



Spearman's rank-order correlation between *illness* status & VJ score:

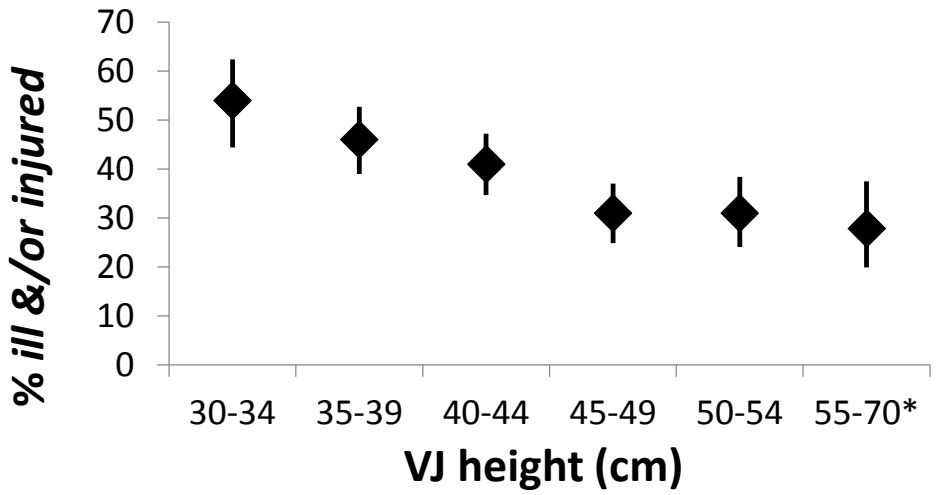
$r_s = -.157, p < .001$

* Pooled results (small cell counts)

Orr, R., Pope, R., Peterson, S., Stierli, M. & Hinton, B. (2016). Leg power as an indicator for risk of injury or illness in police recruits, International Journal of Environmental Research and Public Health– 13, 237; pp.1-10. doi:10.3390/ijerph13020237

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Vertical Jump
    - Percentage of Recruits reporting **illness &/or injury**, by VJ height, with 95% CI



Spearman's rank-order correlation between *illness/injury* status & VJ score:

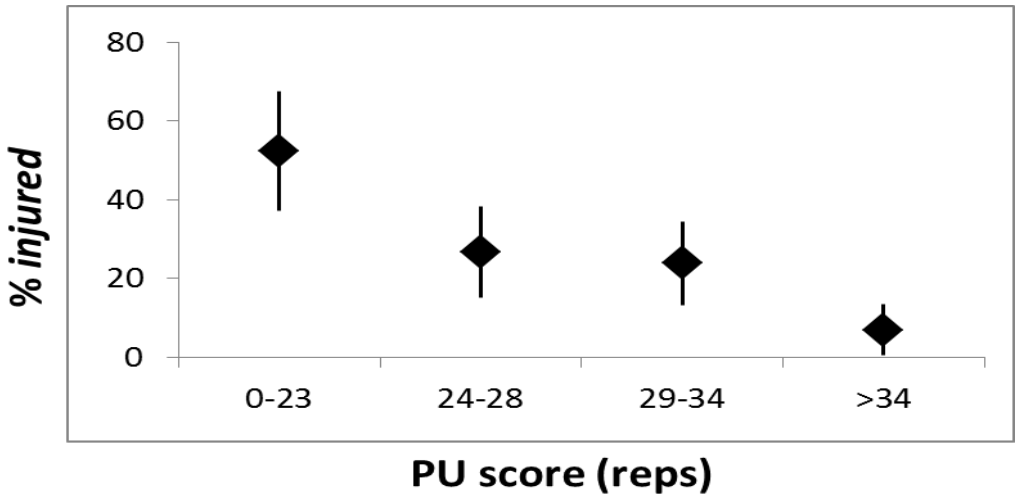
$r_s = -.170, p < .001$

* Pooled results (small cell counts)

Orr, R., Pope, R., Peterson, S., Stierli, M. & Hinton, B. (2016). Leg power as an indicator for risk of injury or illness in police recruits, International Journal of Environmental Research and Public Health– 13, 237; pp.1-10. doi:10.3390/ijerph13020237

What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Push Ups
    - Percentage of Recruits injured, by PU score, with 95% CI



Spearman's rank-order correlation between *injury* status & PU score:

$r_s = -0.348, p < 0.001$

* Pooled results (small cell counts)

Stewart et al., unpublished work

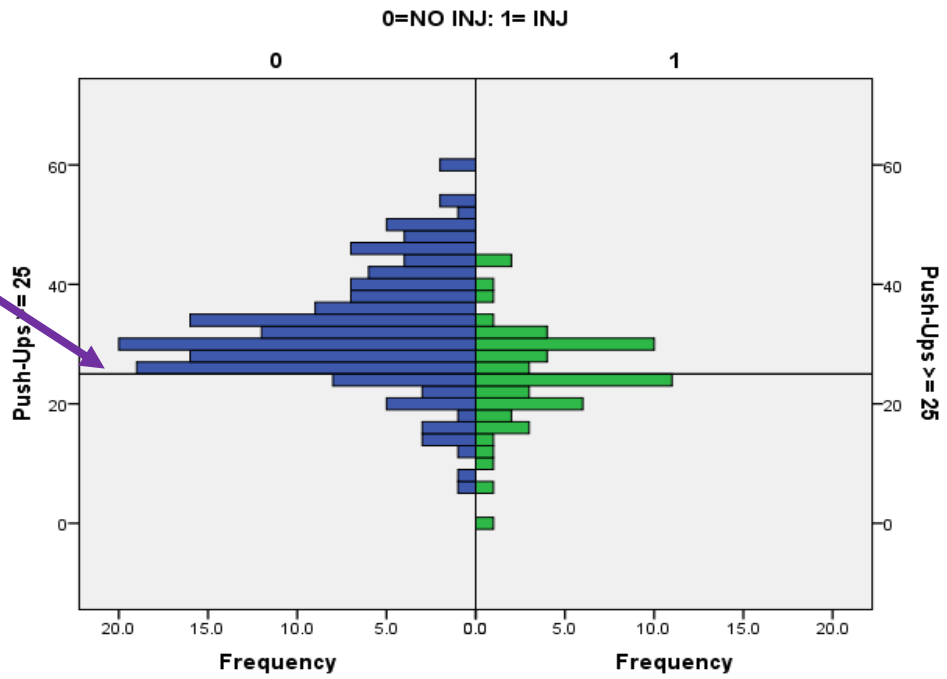
What is the purpose of the test?

- Purpose of the testing – Injury prediction/prevention
  - Police Officer Recruits
    - Measure was Push Ups

Pass rate for police recruits = 25 PU

25.6% did not achieve 25 PU (n=56)

Of those 53.7% sustained injury



Stewart et al., unpublished work

What is the purpose of the test?

- Purpose of the testing – Injury prediction/ survivability
  - Australian Army Special Forces Entry Test

Hunt, A.P., Orr, R.M., & Billing, D.C. (2013). Developing physical capability standards that are predictive of success on special forces selection courses. *Military Medicine*, 178 (6), 619- 624

What is the purpose of the test?

- Purpose of the testing – Injury prediction/ survivability
  - Australian Army Special Forces Entry Test

	Pass	Fail (All Candidates)	Fail (Excluding 20-km March Fails)
n	39	65	38
SFET Assessments			
Maximal Aerobic Capacity (mL·kg^{-1}·min^{-1})	55.1 ± 3.3	54.2 ± 2.8	54.8 ± 3.3
5-km March (Minutes)	45.2 ± 2.4	45.9 ± 2.2	45.2 ± 1.6
Push-ups (Repetitions)	69 ± 12	63 ± 12*	63 ± 14*
Sit-ups (Level)	4.6 ± 1.3	4.2 ± 1.4	4.4 ± 1.3
Heaves (Repetitions)	12 ± 2	12 ± 2	12 ± 2
Agility (Seconds)	8.1 ± 0.6	8.0 ± 0.7	7.9 ± 0.8
Swim (Minutes)	8.6 ± 1.2	8.9 ± 1.2	8.9 ± 1.2
Flexibility (cm)	31.2 ± 5.9	30.3 ± 5.6	30.5 ± 6.0
Jump Height (cm)	55.7 ± 7.1	55.6 ± 6.8	55.9 ± 6.6
Barrier Assessments			
3.2-km Battle Run (Minutes)	15.0 ± 0.7	15.5 ± 1.1*	15.1 ± 0.7
20-km March (Minutes)	182.9 ± 9.0	192.0 ± 9.6*	187.6 ± 7.3*

*Significantly different from the pass group, $p < 0.05$.

Hunt, A.P., Orr, R.M., & Billing, D.C. (2013). Developing physical capability standards that are predictive of success on special forces selection courses. *Military Medicine*, 178 (6), 619- 624

What is the purpose of the test?

- Purpose of the testing – Injury prediction/ survivability
  - Tactical Operations Unit (Special Weapons and Tactics)

Caust, E., Hinton, B. Orr, R. & Pope, R. Physical predictors of success on a specialist police selection course, manuscript in preparation

What is the purpose of the test?

- Purpose of the testing – Injury prediction/ survivability
  - Tactical Operations Unit (Special Weapons and Tactics)

GROUPS	Group 1 (failed BFA)	Group 2 (passed BFA, failed to complete SSC)	Group 3 (completed SSC - not selected)	Group 4 (completed SSC - selected)	Correlation between characteristic & level of success
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	r_s, p
Pull Ups (reps)	12.63 ± 3.89	15.75 ± 6.14	14.57 ± 1.90	16.10 ± 3.38	0.41, p=.017*
Push Ups (reps)	46.00 ± 9.15	50.38 ± 9.37	47.57 ± 3.26	58.80 ± 11.89	0.45, p=.009**
Ab Str (Level 1-7)	2.63 ± 0.74	3.00 ± 0.00	3.00 ± 0.00	3.00 ± 0.00	0.35, p=.049*
March (secs)	4935.00 ± 770.01	4763.00 ± 176.96	4990.29 ± 300.81	4659.40 ± 233.19	-0.33, p=.078
MSFT (no. of shuttles)	95.00 ± 0.00#	102.88 ± 12.11	101.00 ± 12.72	101.60 ± 6.11	0.11, p=.585
Agility run (secs)	22.40 ± 0.00#	17.93 ± 1.08	17.08 ± 1.43	17.12 ± 0.53	-0.40, p=.043*
Lift and carry (secs)	173.00 ± 0.00#	174.00 ± 15.68	178.00 ± 8.76	160.60 ± 9.85	-0.49, p=0.010*
300m swim (secs)	-	794.75 ± 95.63	903.00 ± 29.63	702.30 ± 137.53	-0.32, p=.118

Caust, E., Hinton, B. Orr, R. & Pope, R. Physical predictors of success on a specialist police selection course, manuscript in preparation

What is the purpose of the test?

- Purpose of the testing – Occupational capability
  - Based on capability rather than gender …. or age

http://media.gettyimages.com/photos/nahal-oz-israel-an-israeli-army-soldier-carries-a-shell-to-the-155mm-picture-id57555267

http://chicagoareafire.com/blog/wp-content/uploads/2014/07/Haak_CalPark_005.jpg

What is the purpose of the test?

- Purpose of the testing – Occupational capability
  - What is needed to complete key tasks

http://www.firefitsteeringgroup.co.uk/Graham_Rothwell.pdf

http://images.canberratimes.com.au/2012/03/14/3129265/1554010-420x0.jpg

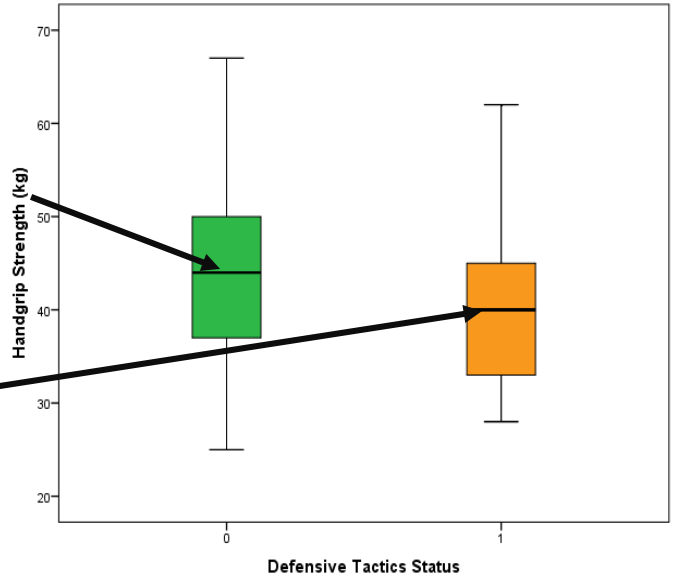
What is the purpose of the test?

- Purpose of the testing – Occupational capability
  - Police Officer Recruits
    - Measure Grip Strength
    - Defensive Tactics

(*rs*[169]=-.227, p=0.03)

43.68 ± 8.36 kg
(25-67)

40.00± 7.73kg
(28-62)



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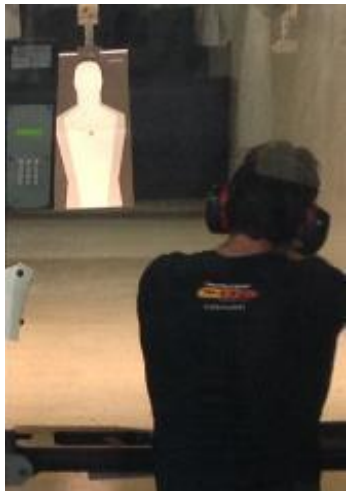
What is the purpose of the test?

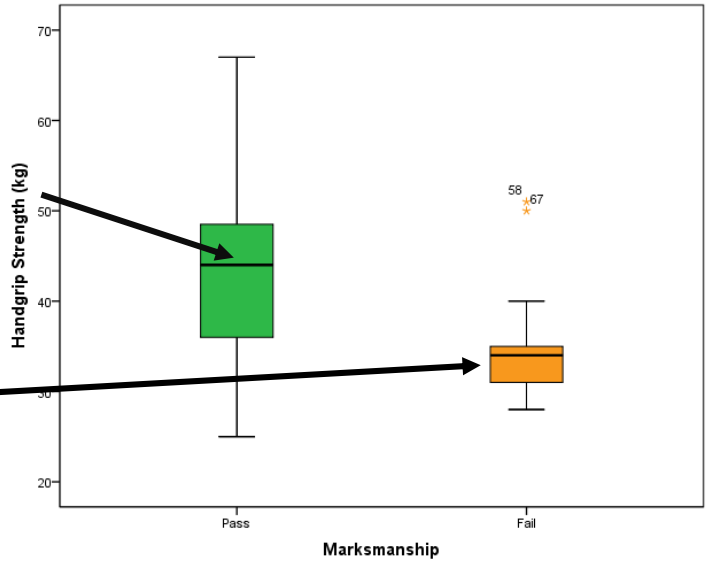
- Purpose of the testing – Occupational capability
  - Police Officer Recruits
    - Measure Grip Strength
    - Marksmanship / Shooting



(rs[169]=-.419, p<0.001)

43.22 ± 8.04 kg
(25-67)

34.67± 5.94kg
(28-51)



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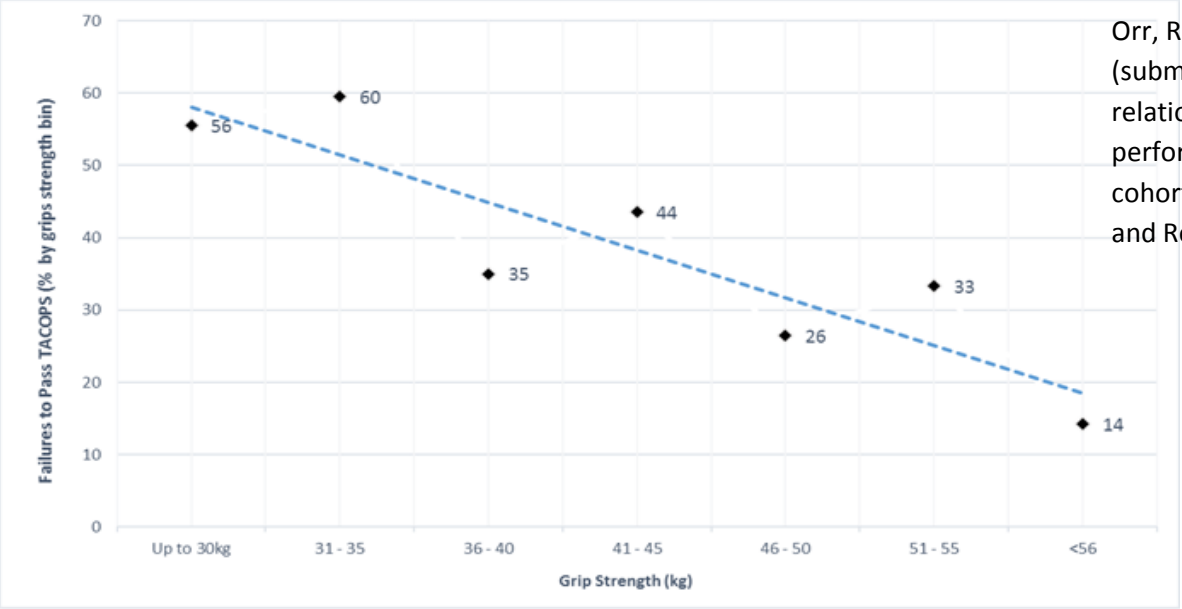
    - Defensive Tactics



Orr, R., Pope, R., Stierli, M. & Hinton, B. (submitted) Grip Strength and its relationship to police recruit task performance and injury risk: A retrospective cohort study, BMC Sports Science, Medicine and Rehabilitation

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    - Measure Grip Strength
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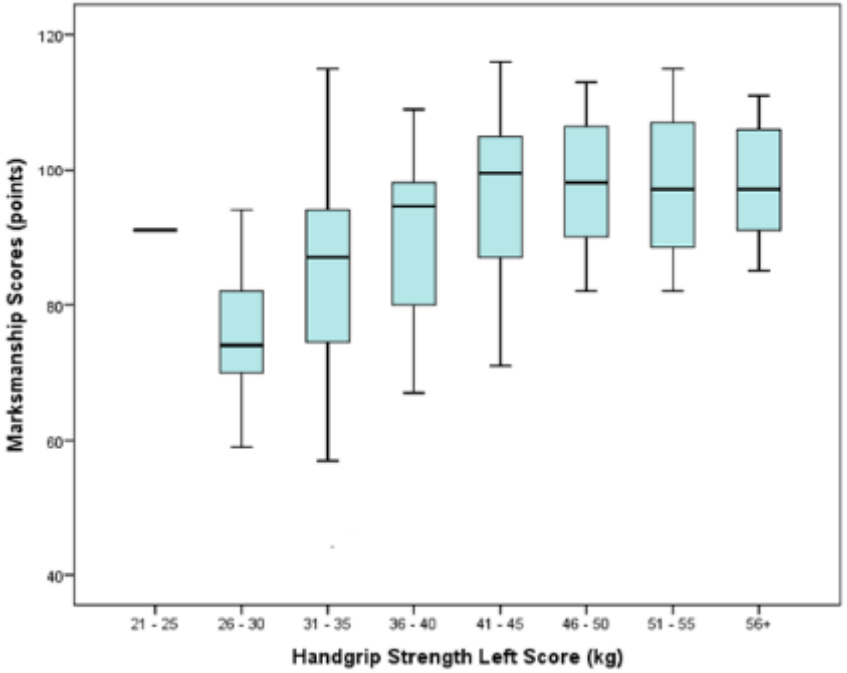
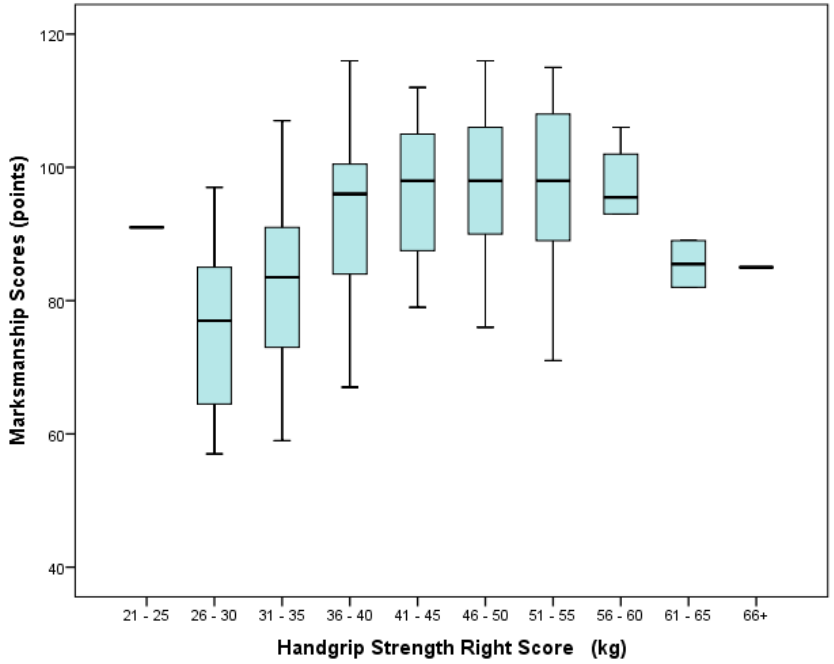




What is the purpose of the test?

- Purpose of the testing – Occupational capability
  - Australian Army - Physical Employments Standards Army (PESA)

Assessment	Overview	AC PESA	CA PESA	Infantry PESA
Weight Load March	March with load at a rate of 5.5km/h (11min per km)	5km – 22kg load Time: 50-55 minutes	10km – 38kg load Time: 100-110 minutes	15km – 45kg load Time: 150-165 minutes

What is the purpose of the test?

- Purpose of the testing – Occupational capability
  - Australian Army - Physical Employments Standards Army (PESA)

Assessment	Overview	AC PESA	CA PESA	Infantry PESA
Weight Load March	March with load at a rate of 5.5km/h (11min per km)	5km – 22kg load Time: 50-55 minutes	10km – 38kg load Time: 100-110 minutes	15km – 45kg load Time: 150-165 minutes
Fire & Movement Simulation	Complete 6m bounds (every 20 secs) to a cadence track (pers have 5 secs to reach 6m mark with 15 sec rest)	12 x 6m bounds	16 x 6m bounds + 18m leopard crawl	1km move with 22kg load in 8 minutes + 16 x 6m bounds + 18m leopard crawl
Casualty Drag	Drag casualty dummy (approx 82kg) 10m in 10 secs	N/A	N/A	Drag casualty dummy 10m in 10 secs
Lift & Carry	Carry 2 x 22kg jerry cans in 25m legs to a cadence track (20 sec per 25m with 5 sec rest)	6 x 25m legs	11 x 25m legs Artillery only - Carry 1 x 43kg inert round 10 x 10m legs to a cadence track	11 x 25m legs
Box Lift & Place	Lift a weighted box from the ground to a 1.5m high platform using a prescribed lifting technique	25kg	30kg Combat Engineer only – 40kg	35kg

What is the purpose of the test?

- Purpose of the testing – General health
  - Considers gender and age
  - Predictor of mortality

http://www.army.gov.au/~/media/Images/Army%20Life/ARTC/Images/Fitness%20preparation%20460X306.ashx?h=306&w=460

http://mediaassets.caller.com/photo/2014/05/06/524438_4399007_ver1.0_640_480.JPG

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in gender

	♀	♂
Age (yrs)	36.21±8.45	39.52±8.09
Weight (kg)	67.49±25.62	91.99±19.54†
Height (cm)	164.65±29.82	177.98±23.13†
Vertical Jump (cm.)	36.80±5.69	50.74±8.89†
Leg/Back Dynomometer (kg)	116.53±20.85	170.68±37.46†
Grip (kg)	37.875±5.34	55.04±7.77†
Push-ups (repetitions)	24.24±11.63	39.09±15.61†
Sit-ups (repetitions)	31.06±9.52	34.46±10.29
Shuttles (number)	26.19±10.86	38.04±19.87†

Dawes, J. Flores, R., Orr, R., Lockie, R. Kornhauser, C. & Holmes, R. (submitted) Health and performance related physical fitness profiles of state highway patrol officers with age and gender comparisons

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in age (shuttle run)

Age group	20-29	30-39	40-49	50-59
Mean (SD)	55.63 (20.90)	42.19 (19.85)	31.31 (15.52)	26.74 (13.20)
95	89.91	74.74	56.76	48.39
90	82.38	67.60	51.18	43.64
60	60.86	47.15	35.19	30.04
55	58.35	44.77	33.33	28.46
50	55.63	42.19	31.31	26.74
45	52.91	39.61	29.29	25.02
40	50.41	37.23	27.43	23.44
10	28.88	16.78	11.44	9.84
5	21.35	9.64	5.86	5.09

Dawes, J. Flores ess profiles of state highway patrol officers with age and gender comparisons

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in gender and age

The Australian Army Basic Fitness Assessment

Age	Push-ups (number)	Sit-ups (number)	2.4 km Run (minutes)
25 and under	40	70	11:18
26-30	35	65	11:48
31-35	30	57	12:18
36-40	25	50	12:42
41-45	20	30	13:12
46-50	10	20	13:48
51 and over	6	15	14:30

Push-ups (number)	Sit-ups (number)	2.4 km Run (minutes)
21	70	13:30
18	65	14:00
15	57	14:30
10	50	15:00
7	30	15:30
3	20	16:00
3	15	16:30

http://content.defencejobs.gov.au/pdf/army/DFA_Document_BasicFitnessAssesment.pdf

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in gender and age

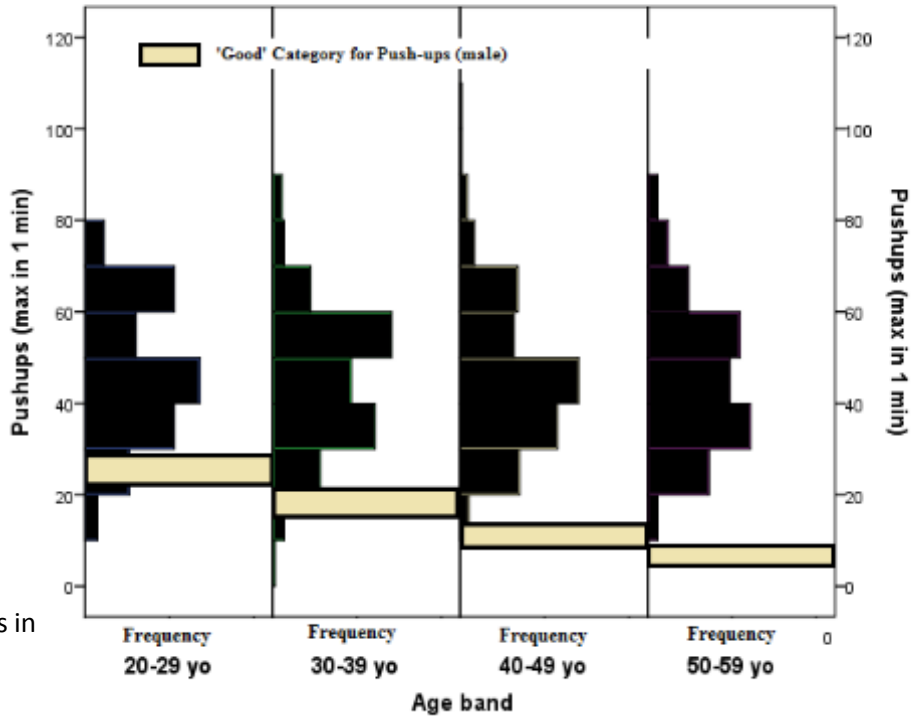
The US Army Physical Fitness Test

PUSH-UPS MALE										
AGE GROUP	17–21	22–26	27–31	32–36	37–41	42–46	47–51	52–56	57–61	62+
MAXIMUM 100%	71	75	77	75	73	66	59	56	53	50
MINIMUM 60%	42	40	39	36	34	30	25	20	18	16

PUSH-UPS FEMALE										
AGE GROUP	17–21	22–26	27–31	32–36	37–41	42–46	47–51	52–56	57–61	62+
MAXIMUM 100%	42	46	50	45	40	37	34	31	28	25
MINIMUM 60%	19	17	17	15	13	12	10	9	8	7

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in gender and age
  - What are standards based on? Normative population?

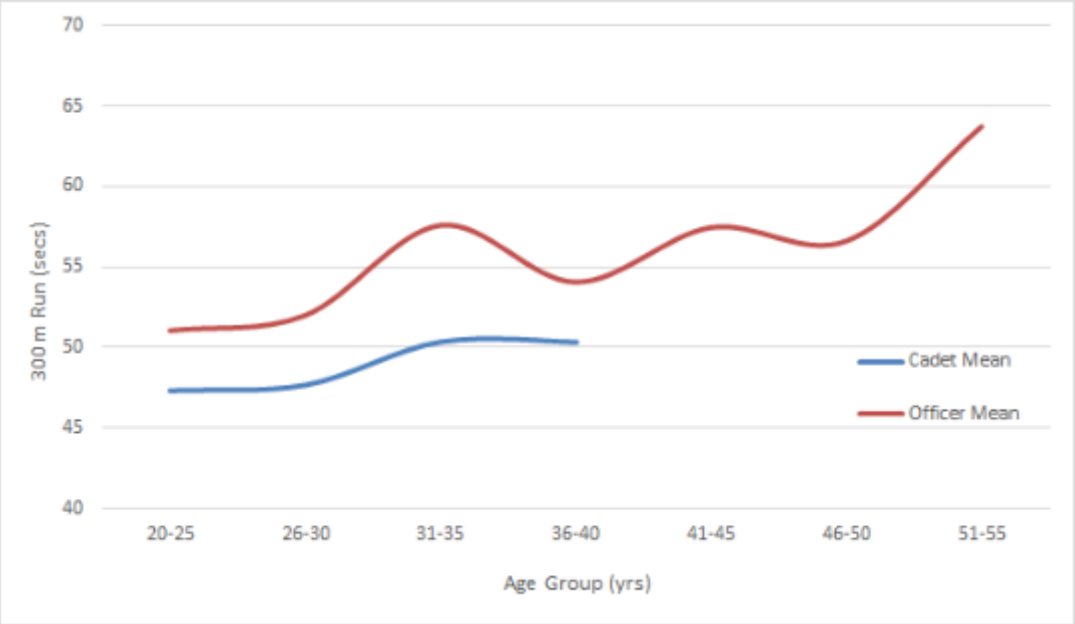


Dawes, J., Orr, R., Brandt, B., Conroy, R. & Pope, R. (2016). Age differences in push up performance amongst male Law Enforcement Officers, Journal of Australian Strength and Conditioning. 24(4) 23-27

What is the purpose of the test?

- Purpose of the testing – General health
  - Differences in gender and age
  - Stage of training?

Orr, R., Dawes, J., Pope, R. & Terry, J. (submitted). Key Differences in Anthropometric and Fitness Characteristics between Police Academy Cadets and Full Time Officers are not Explained by Age, PLOS ONE



What is the purpose of the test?

- Purpose of the testing – Validation
- To review the effectiveness of training through evidence based research
  - Data collected pre- and post- training programs
  - Subjects : 90 male (n = 70) and female (n = 20) police cadets aged from 21 to 44 years (27.4 ± 5.9 years) from US Police Department
  - 2 Different conditioning programs

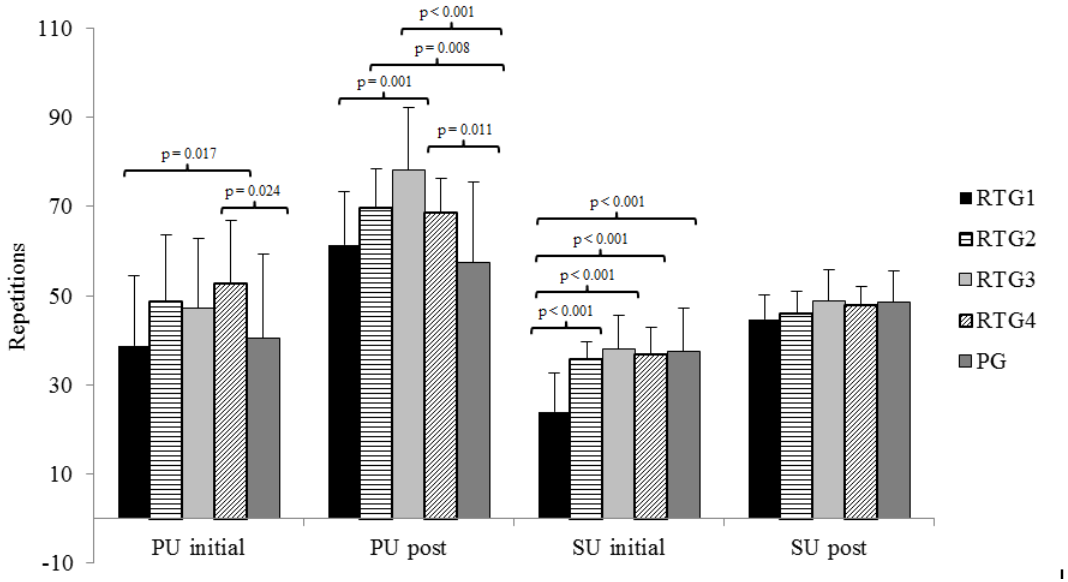
Cocke, C., Dawes, J.J. & **Orr, R**. (2016). The impact of two different conditioning programs on fitness characteristics of police academy cadets, Journal of Athletic Training 51(11), pp. 887-896:000–000 doi: 10.4085/1062-6050-51.8.06

What is the purpose of the test?

- Purpose of the testing – Validation

PURPOSE OF TESTING – RESEARCH (VALIDATE TRAINING)

- To review the effectiveness of training through evidence based research



Cocke, C., Dawes, J.J. & Orr, R. (2016). The impact of two different conditioning programs on fitness characteristics of police academy cadets, Journal of Athletic Training 51(11), pp. 887-896:000–000 doi: 10.4085/1062-6050-51.8.06

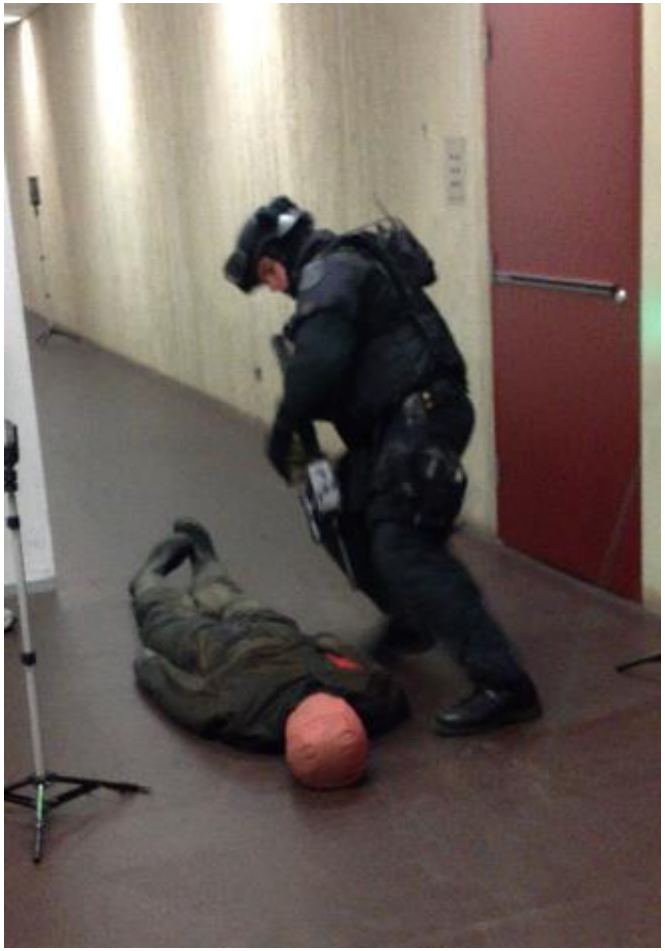
Designing the Assessment

http://www.dsto.defence.gov.au/gallery/1874/thumb_22203-135.jpg

- Reason for the testing
  - Injury prediction / occupational performance / health?
- Needs analysis
  - What is known
    - E.g. current standards / normative data
  - What do we need to know
    - E.g. most important tasks? types of injuries?
- Identify key requirements for identified tasks
  - Eg. Use of force - AnPwr. / MStr./ MEnd.
- Suitable Tests
  - Valid?
  - As many characteristics as possible

Designing the Assessment

- Performance criteria
  - What standards and why?
  - Legally defendable



Designing / Applying the Assessment

- Logistics and Procedure
  - Viability (1 RM for 300 soldiers)
  - Testing sequence
    - Shuttle Run 1st as it included a warm up?
  - Equipment and locations

Designing / Applying the Assessment

- Health and Safety Considerations
  - Temp, humidity, lightning, medical history, trainers, emergency response plan
  - Emergency facilities
- Selection and Training of Testers
  - Proper training on technique and administration (number per station)
- Test Format and Sequencing
  - Time starts,# groups, rest
- Record Keeping / Data entry
  - Who?

In-depth look at Designing the Assessment Framework – Law Enforcement

Jay Dawes, Trooper Charles Kornhauser & Master Trooper Ryan Holmes

- Toward Validation: The Colorado State Highway Patrol Project
- Wednesday, April 5,2016: 15:00-15:50

In-depth look at Designing the Assessment Framework – Military

Tim Doyle

- Scientifically Defensible Physical Testing for Tactical Operators
- Wednesday, April 5,2016: 08:00-08:50

TAKE HOME MESSAGES

- It is vital you know WHY you are doing / designing a fitness assessment framework
- Standards need to consider this reason and take into account the intent of the assessment (e.g. fitness or occupational performance)
- The application of the assessment framework
  - How will it work?
  - Can it be done with large numbers/equipment needs/staff needs

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Physical Screening and Testing: From Purpose to Research to Application

DR. Rob Orr

Tactical Research Unit

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SCREENING AND ASSESSMENT FOR TACTICAL OCCUPATIONS